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DANIELS COUNTY CONSERVATION DISTRICT

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LONG RANGE PROGRAM

Montana 1976

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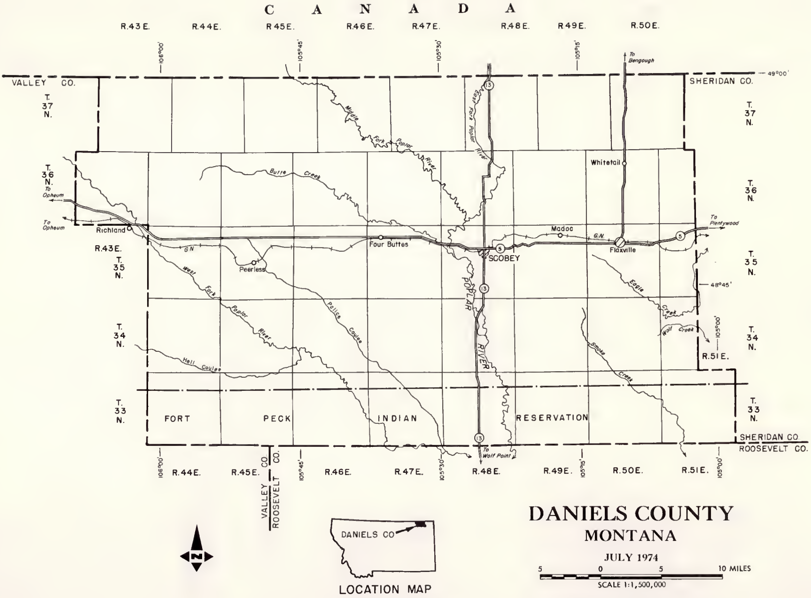

DANIELS COUNTY
MONTANA

JULY 1974

SCALE 1:1,500,000

TRANSVERSE MERCATOR PROJECTION
SOURCE MATERIAL: AMS TOPOG NM 13-10, 13-11

Standing left to right
Vice Chairman--- William Cromwell Jr.
Supervisor------ Walter Brandt
Secretary------- Wallace Fladager

Seated left to right
District Secretary--- Mary Tymofichuk
Chairman------------- Boyd Tymofichuk
Treasurer------------ Orville Odegard

FOREWORD

The Daniels County Conservation Program is a guide to assist the district supervisors and others with the over-all development of the natural resources in the county. This program was prepared by the Board of Supervisors, with assistance from numerous individuals, groups, local, state and federal agencies.

Section I deals with the over-all operations of the district program including authorization, history, and responsibilities of the governing body.

Section II outlines the policy as adopted by the district board. These statements provide the direction for development of district resources.

Section III includes an inventory of the resources in the district and presents a detailed analysis of the current resource situation.

Section IV outlines the broad objectives, goals and priorities which the district will strive to achieve through the implementation of this program.

Section V identifies various problems and opportunities which exist in the district. These will be reviewed and used by the board as a reference for developing their annual plan of work.

Section VI deals with various alternatives available to the district to use in implementing this program to attain the goals they have established.

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SECTION I

PURPOSES

PURPOSES

A. General

The Daniels County Conservation Program is a local plan of action to assist conservation district land occupiers with soil and water conservation and related natural resource uses based on land capability. The conservation district program serves in part and contributes to:

1. Resource conservation and development planning;
2. Comprehensive land use planning;
3. Pollution abatement planning.

The program includes:

1. Obtaining and reacting to public involvement;
2. Establishing policy;
3. Inventorying and analyzing the resources;
4. Determining objectives and goals;
5. Establishing priorities;
6. Recognizing problems and opportunities for wise use and development.
7. Coordinating the implementation efforts of cooperating land occupiers and many resource groups and agencies;
8. Securing financing, technical and other assistance;
9. Continuing evaluation and updating to reflect changing situations.

B. Purposes

1. Soil Conservation

The primary purpose of the district is preventing soil erosion. In doing this, the district necessarily becomes involved in water conservation, rangeland management, saline seep and all related land uses.

Assistance has come primarily from agricultural agencies. It is anticipated that other agencies and programs, such as the Department of Housing and Urban Development, the Environmental Protection Agency and Federal Revenue Sharing Program, may provide more assistance.

Increased pressures and demands for land as a place to live, work and play are expanding the district's role. The district has traditionally been oriented toward agriculture, for this is the use to which most land and water has been put.

Coupled with public pressure for a wider diversity of uses in increasing demand for a quality environment. Consequently, additional purposes of this program are to plan measures for pollution control and abatement to include ecological consideration of the multiple use concept as opposed to single use, plus an evaluation of trends towards public ownership and the various methods of regulations that might be used to effect proper land use. Soil conservation also gives emphasis to enhancement of water quality, natural beauty, and wildlife; preservation of scenic qualities, historic sites, and unique natural areas; and improvement of environmental health, job opportunities and education of the public.

2. Administrative Guide

This program will serve as an administrative guide for supervisors and is an outline of the means whereby the board of supervisors hopes to coordinate efforts for the orderly management of natural resources on all lands in the district.

3. Reference

This program will serve as a reference for technicians, county commissioners, land use planners, community planners, researchers, educators and others working with the district.

4. Annual Work Plan

This program will serve as a basis for developing the District Annual Plan of Operations.

5. Information

This program will serve as the basis for an information program. Information will be directed to the public, particularly electors, cooperators, land owners-managers-occupiers-developers, legislators, county commissioners, conservation agencies and organizations, schools, churches, libraries and planning and development agencies.

6. Problems and Opportunities

The district program identifies the conservation problems and opportunities recognized by supervisors, cooperating agencies and advisory groups and outlines measures to correct the problems and/or develop wise management of natural resources. This program attempts to give a history of the district. It also explains and evaluates the present condition of the natural resources (soil, water, vegatation, fish, and wildlife), and the opportunities that exist to protect and develop these resources. It further defines policies, goals and objectives, and working procedures of the supervisors. This program gives consideration to all private and public lands.

C. Jurisdiction

1. Private Lands

Basically the district program has jurisdiction in the private ownership land area and deals with water, soil and related resources. It has, as overall objectives, the treatment of each acre according to its needs and the use of each acre within its capabilities.

2. Public Lands

Mutual problems and opportunities for the conservation, development and use of public lands are intended to correlate with the public land administrators, managers, and users.

D. Method

Land occupiers voluntarily sign cooperative aggreements to develop and carry out a conservation plan with such help and assistance as may be provided by the district and other agencies working through the district. There are also mandatory provisions in the conservation district law for land use regulations, natural streambed and preservation Act, and sediment control.

E. Authorization

The district program is authorized under the provisions of Montana Conservation Districts Law 76-101 to 76-117 and 76-201 to 76-233, Revised Codes of Montana as amended, particularly Section 76-108 (8) and is required as part of Memorandum of Understanding or other appropriate Agreements the district has and is authorized to cooperate and receive assistance from:

U.S. Department of Agriculture dated June, 1967.
Soil Conservation Service dated March, 1975.
Montana Department of Natural Resources and
    Conservation dated February, 1973.
U.S. Department of Interior dated October 1963.

Informal working relations have been established, or are desired, for cooperation and assistance from the following:

Federal

- U.S. Department of Agriculture
- U.S. Department of Interior.
  - Bureau of Land Management
  - Bureau of Outdoor Recreation
  - Bureau of Reclamation
  - Bureau of Sports Fisheries and Wildlife
  - Bureau of Indian Affairs
  - Bureau of Geological Surveys
- U.S. Department of Health, Education and Welfare
- U.S. Department of Commerce
  - Office of Economic Opportunity
- U.S. Department of Housing and Urban Development
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
  - Immigration and Naturalization Service

State

- Montana Highway Commission

Montana Environmental Protection Council
Montana Department of Intergovernmental Relations
Montana Department of Health and Environmental Sciences
Montana Department of Fish and Game
Montana Extension Service
Montana Department of Lands & Investments
Montana Department of Natural Resources

Local

County Commissioners
Town of Scobey & Flaxville
County Planning Boards
Superintendent of Schools
School Districts
Airport Commission

Non-Governmental

Associations of resource interests such as developments groups, banks, churches, youth groups, civic groups, etc.

Other major laws which relate to the district program are:

1. P.L. 46, Soil Conservation and Domestic Allotment Act of 1936. (USDA Secretary's Memorandum No. 1488 of February 1, 1962);
2. P.L. 566, Watershed Protection and Flood Prevention Act of 1954;
3. P.L. 87-703, Section 102 of the Food and Agriculture Act of 1962, Resource Conservation and Development program;
4. P.L. 91-190, National Environmental Policy, January 1, 1970;
5. P.L. 92-500, Federal Water Pollution Control Act of 1972;
6. P.L. 92-419, Rural Development Act of 1972;
7. P.L. 93-86, Title X, Agriculture and Consumer Protection Act of 1973;

8. S.B. 310 Natural Streambed and Land Preservation Act of 1975;
9. Water Quality Rules and Regulations of Department of Health and Environmental Sciences;
10. Floodplain Rules and Regulations of Montana Department of Natural Resources and Conservation;
11. Subdivision Regulations of the Montana Department of Inter-governmental Relations and County Commissioners.

F. Organization, location, acreage

The District was first organized on June, 1947 as a result of petitions to the State Soil Conservation Committee and a hearing and referendum held and included all of the County excepting the incorporated Town of Scobey.

The Town of Scobey petitioned and entered the District on May 18, 1971. The present land area of the district is 923,520 acres.

The District name was "Daniels County Soil Conservation District" until 1962 when it was changed to "Daniels County Soil and Water Conservation District" and in 1971 the name was changed to "Daniels County Conservation District". These changes reflect the broader areas of resource conservation and development related to the district and its increased responsibilities.

G. Responsibilities

The supervisors are elected by the qualified electors within the district or in the case of the urban supervisors, appointed by the mayor. They are the governing body of the Conservation District with broad authorities as outlined in the Conservation Districts Law to develop and carry out a resource conservation and development program with the use of all available resources and authorities that they choose to use and can obtain. It is the policy of the district to cooperate with and use the services of other agencies for technical, educational, planning, research, and financial assistance to private land occupiers to plan and apply conservation practices. The Montana Department of Natural Resources and Conservation and District Supervisors can request state and county funds for the operation of the district.

SECTION II

DISTRICT POLICIES

POLICIES

It is the policy of the Daniels County Conservation District to involve the public and cooperators to carry out the program of the State of Montana and the district with respect to the conservation of the soil and water resources and for control and prevention of soil erosion, prevention of floodwater and sediment damages, furthering the conservation, development, utilization and disposal of water. It shall further be the district's aim to prevent and to control floods, prevent impairment of dams and reservoirs, protect the tax base, protect public and private lands, to assist in the carrying out of the environmental policies and programs of the state relative to natural resources and to assist in the carrying out of land use policies and regulations as provided in various state and federal statutes.

Specifically, the Daniels County Conservation District adopts the following policy for their resource planning program:

A. Encourage an accelerated education and information program to convey a basic understanding of the need for proper land use to all segments of society. Land use policies and plans must be developed with broad public involvement to ensure citizen support and understanding.

B. Consideration will be given to the needs and desires of the people to provide a quality environment, to ensure attractive, convenient and satisfying places to live, work and play.

C. The rights to economic opportunity and freedom of choice in the use of land should remain with the landowner so long as they do not destroy the resource or conflict with a safe, clean and healthy environment for society.

D. Land use policies should be oriented toward protection of the aesthetic values, which are an integral part of our history and way of life.

E. The capability and limitation of soils will be considered in making land use decisions or when increasing the intensity of a land use.

F. Land use policies should consider the impact and influence of the property tax structure. Tax structures should encourage agriculture, wildlife, recreation and similar uses of land in the public interest.

G. To develop and improve the rangeland resource for maximum production, protection of the soil resource and to prevent or reduce sediment pollution of water.

H. To provide broad direction and coordination in maintaining water quality while attaining maximum beneficial use of the surface and ground water resources.

I. Development which results in unsightly urban sprawl shoulc be discouraged.

J. Should mining occur, construction and similar activities which alter and destroy the surface of the land must be treated and reclaimed for planned future uses.

K. Land use policies and plans need periodic review to determine changes in land resources use which are consistent with environmental and social needs.

L. As part of the Conservation District policy and in accord with recent legislation, (PL 92-500 Federal Water Pollution Control Amendments) to work closely with all agencies including the Environmental Protection Agency and Department of Health and Environmental Sciences on all projects involving sedimentation on water pollution problems.

SECTION III

RESOURCE INVENTORY

PRECIPITATION

1931-60	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mean Monthly	0.58	0.50	0.60	0.99	1.67	3.04	1.72	1.76	1.22	0.62	0.42	0.50	13.62
Maximum	1.93	2.61	2.94	2.81	4.54	7.24	9.10	4.69	4.63	1.71	1.61	1.60	21.90
Minimum	T.	.00	T.	.02	.12	.92	.34	.27	.05	.00	.00	.00	8.52

TEMPERATURE

1931-60	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Mean Monthly	9.1	15.3	24.6	42.5	54.1	62.2	70.0	68.3	58.9	46.1	28.4	16.2	41.1
Mean * Daily Maximum	20.2	25.7	35.5	56.0	69.5	75.9	86.3	83.9	71.8	57.7	37.9	26.5	53.9
Mean * Daily Minimum	-1.1	3.4	13.6	28.9	39.7	48.2	54.9	51.8	41.6	31.3	17.0	6.5	28.0
* Highest	55	54	77	91	98	108	110	105	100	90	72	68	
* Lowest	-43	-37	-32	-10	7	23	34	26	15	-4	-28	-33	

* Figures are for 29 year period (1931-1960)

CLIMATE

Daniels County's climate can generally be described as continental with cold winters, warm summers and a marked variation in seasonal precipitation. Precipitation averages 12 to 13 inches annually. In a normal year about 80 percent of the annual precipitation falls during the April-September growing season. June is usually the wettest month followed by May and July.

While snowfall averages are not large compared to the rest of the state, heavy snows do occur infrequently, usually in late winter or early spring. Summer precipitation usually occurs as showers, and thundershowers are fairly frequent. Some of these thundershowers occasionally produce hail heavy enough to damage crops. Steady gentle rains can occur in May, June and September. Winters are quite cold, although not as severe as is thought by many. Some very cold weather can occur each winter, but these severe cold spells do not ordinarily last for an extended period of time. Relatively mild winter weather is not uncommon, however, periods of mild weather do not occur as frequently as in the counties near the Rocky Mountains.

In spring the change from wintery to warmer weather is quite rapid, and the progressive cooling of the fall season is very noticeable during October and November. Summers are characterized by warm weather which often last for weeks at a time. Temperatures can reach highs of 90 degrees or more during any month from May to September, and on about half of the afternoons in July and August temperatures will reach 90 degrees or warmer. The average length of the growing season is 110 days.

Spring is usually the windiest time of year with winds averaging over 20 m.p.h. about 15 percent of the time. Speeds of 50 m.p.h. or stronger occasionally occur as a weather system crosses the state during the fall and winter and during the summer accompanying a thunderstorm. The strongest winds usually come from a westerly direction.

Typical landscape in Daniels County. Note the flaxville gravels in the foreground.

GEOLOGY OF DANIELS COUNTY

The geological history of Daniels County includes long periods of sedimentation, erosion, and continental glaciation. All of the rocks exposed are of sedimentary origin ranging in age from Cretaceous (100 million years old) to Recent (less than 20 thousand years old). During the Cretaceous, thick sequences of marine sediments were deposited as stratified shales, siltstones, and sandstones. These rocks make up the Hell Creek formation. Following a short period of erosion, deposition of lignite-bearing clays, silts, and sandstone of non-marine origin took place during the Tertiary. This sequence of rocks makes up the Fort Union formation.

Capping the highland areas in the county is a relatively thin, well-stratified and well-sorted sand and gravel deposit known as the Flaxville gravel. The gravels are well-rounded which indicates that these deposits were laid down by streams or rivers.

Thin, surficial deposits of glacial origin cover most of the bedrock in the area except for the Flaxville gravels capping the highland. These deposits consist mainly of scattered boulders and pebbles.

Unconsolidated alluvial deposits of gravel, sand, silt, and clay lie along the major drainages in the county. These deposits are Recent in age (less than 20 thousand years old).

The occurrence and distribution of ground water in the county is directly related to the geology. Hydrologic characteristics of the various geologic formations are shown in the legend of the Generalized Geology Map.

GEOLOGIC MAP OF DANIELS COUNTY
EXPLANATION

Age	Symbol	Approx. Thickness	Formation Name and Description	Hydrologic Characteristics
Quaternary	Qal	5-80'	Alluvium - Unconsolidated stream deposited gravel, sand, silt and clay. Deepest along major drainages.	Gravels and Sands are considered good groundwater aquifers. Water quality is good. Yields range from 10 to over 100 g.p.m.
Tertiary	Tf	30-80'	Flaxville gravel - well stratified, well sorted gravel and sand. Caps highland areas.	Good aquifers where adequate recharge area is available. Water quality good. Yields range from 5 to 30 g.p.m.
	Tfu	up to 1,100'	Fort Union formation - non-marine clays, silts, lignite, and sandstones. General buff color.	Considered fair groundwater aquifer. Water quality fair to good. Suitable for livestock and domestic use. Yields range from 5 to 10 g.p.m.
Upper Cretaceous	Khc	200 - 280'	Hell Creek formation - Stratified shales, siltstones, sandstones, and carbonaceous shales. Somber greenish gray appearance. Lower 50-100' is a medium-tan sand or sandstone.	Contains small supply of mineralized water. Yields range from 3 to 8 g.p.m. Water considered suitable for livestock and domestic use.
		Note:	Following formations not exposed in this county, however, they lie beneath the above formations.	
		85-120'	Fox Hills sandstone - Consists of upper sandstone 50-85' thick, with a lower marine shale 35' thick.	Excellent groundwater aquifer. Good quality water. Yields of 10 to 100 g.p.m.
		1,100'	Bearpaw shale - dark olive gray marine shale.	Not considered a groundwater aquifer. Small yields encountered are too highly mineralized for any use.
	⁄ ‒ ‒ ‒		Contact between formations - dashed where indefinite.	

Map and Legend Taken From:

Colton & Bateman, 1956, Geologic and structure contour map of the Fort Peck Indian Reservation and vicinity, Montana: U.S. Geological Survey Map, I-225.

Ross, Andrews, and Witkind, 1955, Geologic map of Montana: U.S.G.S. in cooperation with the Montana Bureau of Mines and Geology.

Well logs and experience in the area by SCS personnel.

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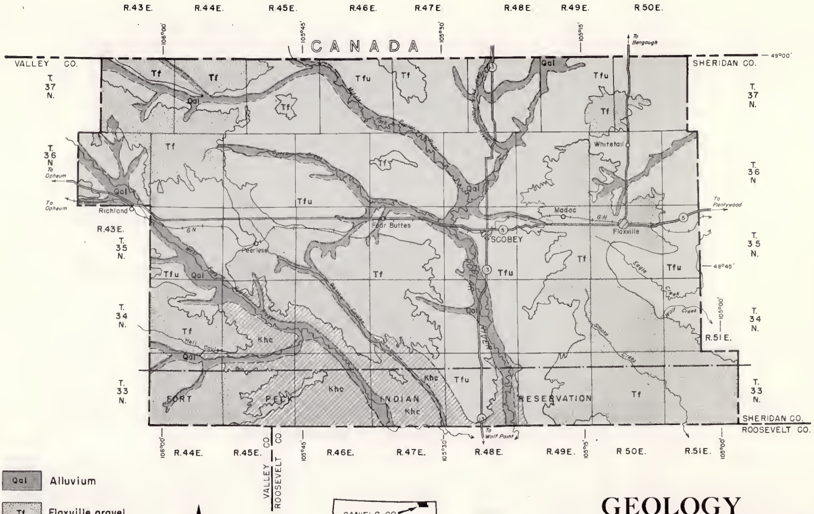


Qal Alluvium

Tf Flaxville gravel

Tfu Fort Union formation

Khc Hell Creek formation

Additional information on preceeding page.

LOCATION MAP

GEOLOGY
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1 : 500,000

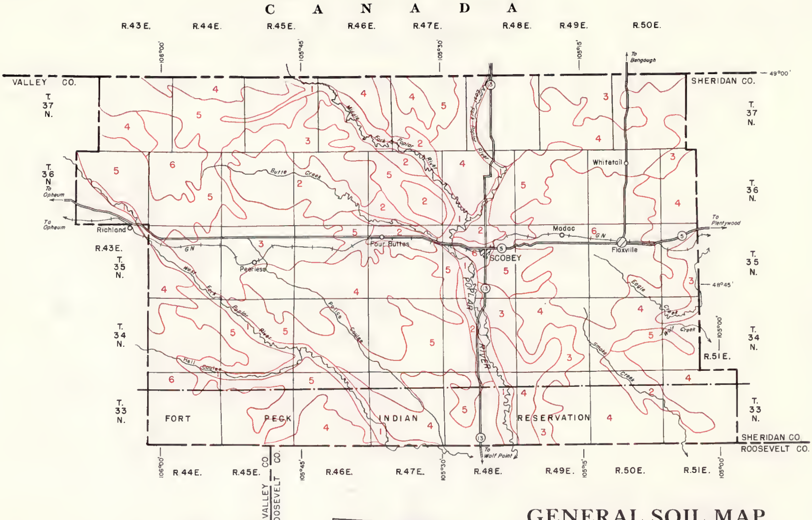
TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-9

SOIL ASSOCIATIONS

A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in one association may occur in another, but in a different pattern. A map showing soil associations is useful to people who want a general idea of the soils in a survey area, who want to compare different parts of this area, or who want to know the location of large tracts that are suitable for a certain kind of land use. At the present there isn't an ongoing soil survey in Daniels County. Tenative plans call for a soil survey of the district to start within the next few years. When the soil survey is completed, more detailed information will be available on all the soils in the district. Following is a description of the soil associations in the district.

1	Nearly level, deep, well-drained to poorly drained soils on floodplains.
2	Nearly level and gently sloping, deep,well-drained soils on terraces and fans.
3	Strongly rolling to very steep, shallow to deep, well-drained soils of shale and sandstone uplands.
4	Nearly level to strongly rolling, deep, well-drained soils of the glaciated plains.
5	Hilly and steep, deep, well-drained soils of the glaciated plains.
6	Nearly level to strongly rolling, deep, well-drained soils of the glaciated plains. (Soils in this association differ from those in association number 4 by having sandy loam and loamy sand textures.)



LOCATION MAP

GENERAL SOIL MAP
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1:500,000

TRANSVERSE MERCATOR PROJECTION

SOURCE MATERIAL : AMS TOPOG NM 13-10, 13-11

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.

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M7-OL-23320-11

Land Use of Inventory Acreage
by
Land Capability Class and Subclass
Daniels County, Montana

Land	Cropland		Pasture	Range	Other	Total	Percent
Capab.	Irr.	Dry	Dry				
3e		206,867	1,300	61,121	5228	274,516	30.0%
3w		200	100	200		500	
3s	212	19,464		5,946		25,622	2.9%
3c	493	166,565	1,950	31,676	3051	203,735	22.4%
Total	705	393,096	3,350	98,943	8279	504,373	52.4%
4e		108,832	1,300	36,136	2177	148,445	16.2%
4s	27	4,710		4,461	435	9,633	1.2%
Total	27	113,542	1,300	40,597	2612	158,078	17.4%
5w		1,697		1,338		3,035	0.3%
Total		1,697		1,338		3,035	0.3%
6e		29,430		172,059		201,489	
6w	117	3,698		17,399	435	21,649	
6s		854		20,522		21,376	
Total	117	33,982		209,980	435	244,514	26.9%
7e				800		800	
7s				838		838	0.1%
Total				1,638		1,638	0.1%
8				300		300	
Total				300		300	
Grand Total	849	542,317	4,650	352,896	11,326	911,938	
Percent	0.1%	59.4%	0.5%	38.7%	1.3%		100%

LAND CAPABILITY CLASSIFICATION

The capability classification is a practical grouping of soils. Soils and climate are considered together as they influence use, management, and the kinds of crops that can be grown. The classification contains two general divisions: (1) Land suited for cultivation and other uses, and (2) Land limited in use and not best suited for cultivation. Each of these broad divisions has four classes. The hazards and limitations in use increase as the class number increases. Capability classes are divided into subclasses. These show the principal kinds of problems involved. The subclasses are: "e" for erosion, "w" for wetness, "s" for soil, and "c" for climate, short growing season or drouthy conditions.

Land Suited For Cultivation And Other Uses

Class 3	Soils in Class 3 have more limitations and hazards than those in Class 2. They require more difficult or complex conservation practices when cultivated. They are suited for cultivated crops, pasture, range, woodland, and wildlife.
Class 4	Soils in Class 4 have greater limitations and hazards than Class 3. Still more difficult or complex measures are needed when cultivated. They are suited for growing cultivated crops, pasture, range, woodland and wildlife.

Land Limited In Use--Generally Not Suited for Cultivation

Class 5	Soils in Class 5 have little or no erosion hazard but have other limitations that prevent normal tillage for cultivated crops. They are suited for pasture, range, woodland and wildlife. There are no Class 5 lands in the District.
Class 6	Soils in Class 6 have severe limitations or hazards that make them unsuited for most cultivation. They are suited generally for pasture, range, woodland, and wildlife.
Class 7	Soils in Class 7 have very severe limitations or hazards that make them generally unsuited for cultivation. They are suited for range, woodland, and wildlife.
Class 8	Soils and land forms in Class 8 have limitations and hazards that prevent their use for cultivated crops, pasture, range, or woodland. They may be used for recreation, wildlife and water supply.

WATER RESOURCES

The water resources of the district are one of its most important assets. Water is essential for domestic, agricultural, industrial, wildlife and recreational uses. Demands for water for industrial development in Canada, just north of the international border is expected to adversly effect the flow in the East Fork of the Poplar River. If additional development is made, the flows of the Middle Fork and West Fork of the Poplar River may also be affected.

Below is a chart of the Stream Gaging Stations located on the 3 Forks of the Poplar River.

Stream	Gaging Station Location	Drainage Area-sq.mi.	Maximum Discharge cfs	Date	Minimum Discharge cfs	Date
Middle Fork Poplar River	at Int. Border	362 sq. mile	12,700	4/6/54	No flow	At times
East Fork Poplar River	at Int. Border	534 sq. mile	2,760	3/22/39	No flow	At times
East Fork Poplar River	Near Scobey	445 sq. mile	3,700	3/22/39	No flow	At times
West Fork Poplar River	at Int. Border (Valley Co.)	139 sq. mile	5,450	4/14/52	No flow	At times
West Fork Poplar River	Near Richland	420 sq. mile	3,600	3/23/39	No flow	At times

Stream	Maximum Runoff (1000 ac.ft.)	Date	Minimum Runoff (1000 ac.ft.)	Date
Middle Fork Poplar River	N/A	N/A	N/A	N/A
East Fork Poplar River	34.64	1955	2.74	1959
East Fork Poplar River	N/A	N/A	N/A	N/A
West Fork Poplar River	N/A	N/A	N/A	N/A
West Fork Poplar River	N/A	N/A	N/A	N/A

Water spreading

At present there are approximately 2170 acres of waterspreading in the district. Waterspreading is the trapment of early flows in a diking system. Usually this type of system supplies only one irrigation early in the spring during the period of snow melt.

Much of the waterspreading in the district is located along the East Fork of the Poplar River. Many of these installations will be affected by low flows during and while the dam at Cornach, Canada is being built and filled. If the proposed plant uses the stored water only for cooling purposes, there should be enough water for the present systems after the construction and filling period.

Future expansion of the plant will permanently affect the systems along the East Fork.

Operators should be encouraged to update their water rights to assure recognition in future years.

Season long irrigation

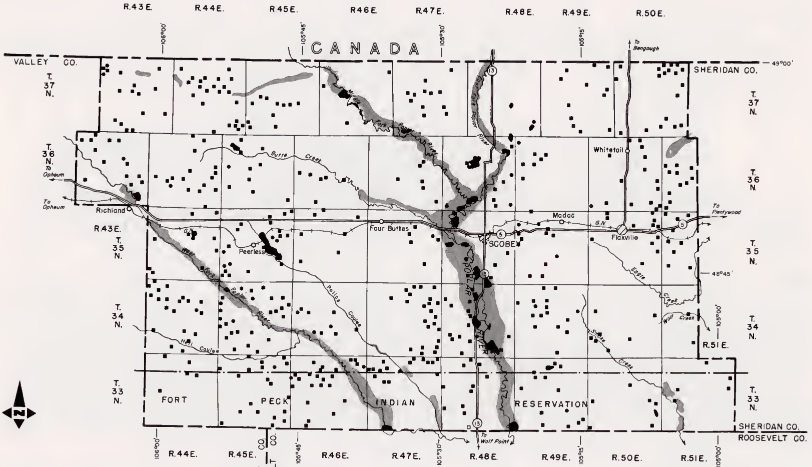
From latest figures available there are 1108 acres in the district which are irrigated season long. Water for these acres is supplied from the three Forks of the Poplar River.

Ground-Water Resources

Ground-Water is widely used in Daniels County for stock and domestic purposes. As of January 1970, there were 475 wells and 151 spring appropriations on file with the Montana Bureau of Mines and Geology. Approximately 118 wells are used for domestic purposes, 165 for livestock, 163 for both stock and domestic use, and twelve for irrigation. The remainder of the wells are used for a variety of other purposes. Of the springs, 125 are used for stock, seven for domestic use, nine for irrigation, and nine springs in use is not recorded.

A preliminary investigation by the Geological Survey indicated very little chance of the underground water being affected by the proposed strip mining in Canada. The district should encourage the Bureau of Mines and Geology to make an extensive underground water study in Daniels County.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND, OREG 1974



LEGEND

■ Existing irrigation and waterspreading

▨ Potential irrigation

▪ Existing reservoirs

▪ Existing spring development

LOCATION MAP

DEVELOPED AND POTENTIAL WATER RESOURCES
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS NM 13-10 & NM 13-11

M7-OL-23320-1

MINERAL RESOURCES

Oil Production

Oil Production in the district has been confined to one producing well in the Smoke Creek field (T34N-R50E). This well has not produced for several years. Total production from the well was 25,215 barrels valued at $67,031.

Coal

Coal is one of the extensive mineral resources in the district. At present there is no strip mining activity in the district and very little if any leasing activity. Most of the coal deposits have been classified as non-strippable because of the unfavorable ratio of depth of overburden to depth of coal seam. The Canadians are starting a strip mine at Cornach (about 25 miles north of Scobey). This coal will be used to fire a steam generating plant near the mining area. It is possible the beds in Canada extend south of the border. The Bureau of Mines and Geology have as of 1975 made no estimate of reserves in Daniels County.

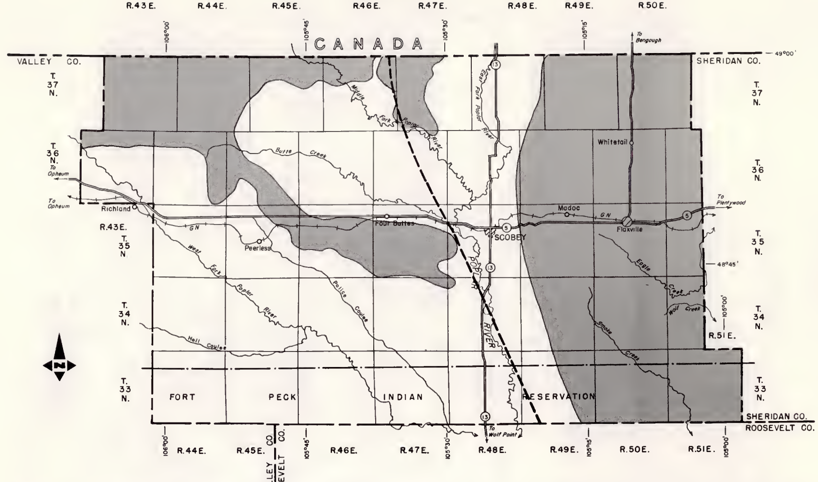
Potash

Considerable interest in potash has taken place during the past year. Leasing and core testing has taken place. Test results are unavailable at this date. Most leasing activity has taken place north of Scobey along the Canadian border. Estimated thickness of sedimentary bed at Scobey is 200 feet. The area where the potash is located was once an inland sea which covered the Northeast corner of Montana, the Northwest corner of North Dakota, and the Southern portion of Saskatchewan. Saskatchewan is the source of nearly all the potash fertilizer used in the United States and Canada. At present 68% of the potash produced in Saskatchewan comes to the United States.

Sand and Gravel

There are large quanities of sand and gravel located in the district. Because of adequate supplies nearer to large markets these deposits have very little commercial value.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE



LEGEND

▨ Lignite — Bed Thickness Greater than 30 inches

— — — Western Limit of Subsurface Devonian Salt Deposits (Potash)

SOURCE: Report of resources of Eastern Montana Basins - U.S. Department of Interior - Bureau of Reclamation August - 1972

LOCATION MAP

MINERAL RESOURCES
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-4

LAND OWNERSHIP
in
Daniels County, Montana

	Acres	Percent
Federal (BLM)	358	Trace
Bureau of Indian Affairs	50,794	5.5%
State	221,915	23.7%
Private	639,229	69.6%
Urban and Built-up	9,250	1.0%
Small Water Areas	1,974	0.2%
Total	923,520	100%

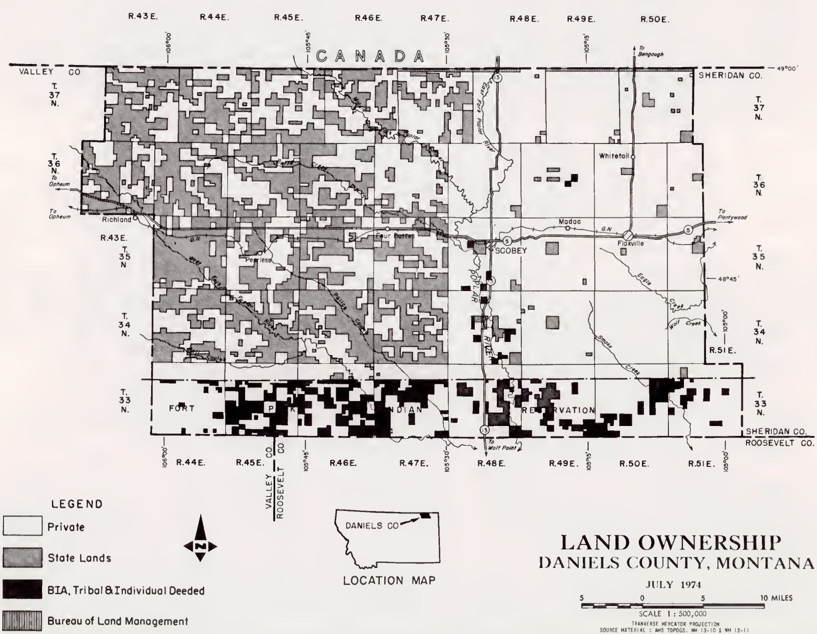
The land ownership pattern of the district is shown on the land ownership map. The approximate ownership of this land is shown on the above chart.

Private ownership accounts for about 70% of the land in the District. In this category are small amounts of municipal and county lands. The state owns 25%, while the Fort Peck Indian Reservation accounts for 5%. The United States Bureau of Land Management indicates that as of 1967, the federal government had no holdings within the district of any significance.

The large amount of State lands in the district is due to the indemnity clause of the Enabling Act, that states that sections 16 and 36 in every township in the state were to be set aside for public, free education. However, many of these sections were reserved by the Federal Government because they were in National Forests, Indian reservations or were mineral in character. Also prior to the completion of the land survey, large portions of the State were homesteads. The law stated that lands which had been homesteaded previous to survey could not be claimed as indemnity. In lieu of the Sections retained by the Federal government and homesteader, the state was allowed to select from surveyed, unreserved and unappropriated public lands.

The county being the third from the last county to be formed in Montana, large acreage of survey, unreserved and unappropiated public lands were available in Daniels County.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND, OREG. 1974



LAND OWNERSHIP
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-7

LAND USE

Prior to 1900, nearly all the land in the district was used for livestock grazing. During the period from 1900-1914, homesteaders settled the area and started dryland farming operations. Presently approximately 96% of the land is used for crop or livestock production. There has been a slight shift upward in the cropland acres during the past few years due to the increase in grain prices. In some cases lands broken out are class 6 and pose a serious erosion in the district. The following table shows a breakdown of various land uses taken from the 1967 Conservation Needs Inventory.

Rangeland	352,896
Cropland	543,166
Pasture land	4,550
Other lands	11,326
Urban & Buildings	9,250
Small Water Areas	1,974
Federal Lands	358
Total	923,520

Cropland constitutes the largest single land use in the District. Dry cropland is used primarily for the production of cereal grains produced under an alternate crop-fallow system.

Rangeland constitutes the next largest use in the District. These lands provide the primary resource for supporting the livestock industry.

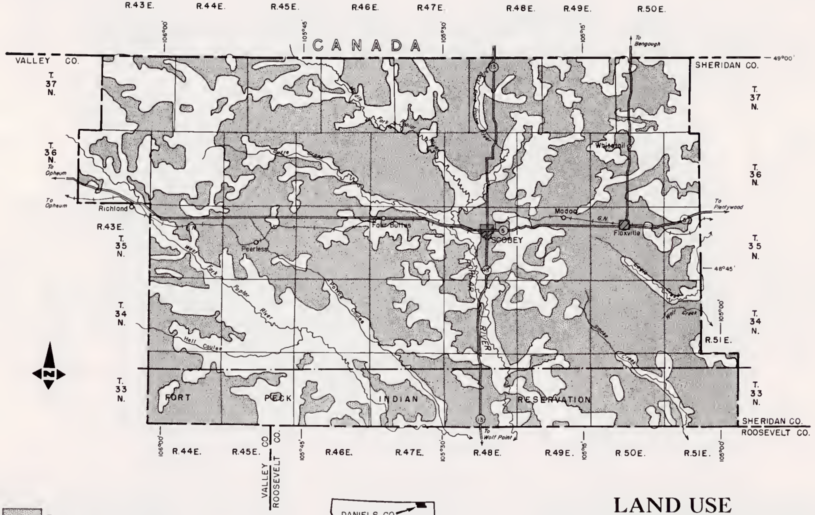
Hay and pasture consist of tame grasses used to supplement livestock feed and forage and are used interchangeably depending on the need.

Other land includes farmsteads, farm roads, rural non-farm residences, investment tracts, country churches, schools, cemeteries and small stock ponds and reservoirs less than two acres in size.

Urban and built-up areas in the District includes towns and other built-up areas of more than 10 acres such as highways, roads, railroads, and industrial sites.

Small water areas are ponds, reservoirs and lakes that are from two to forty acres.

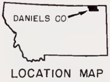
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS PORTLAND OREG 1974



▨ Predominately Cropland

☐ Predominately Grassland

■ Urban & Built-up Areas



LOCATION MAP

LAND USE
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-2

SEVERE EROSION HAZARD AREAS

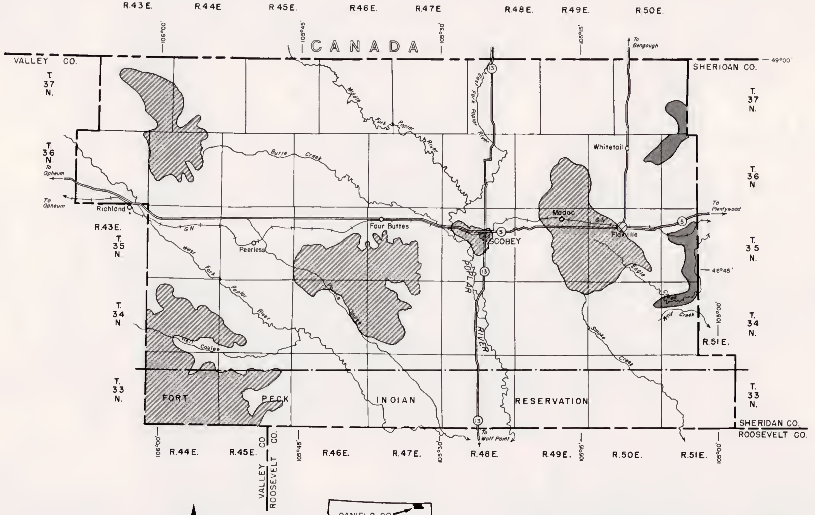
Soil erosion in the District by wind or water occurs in a pattern similar to that of other areas in Eastern Montana. Because soils vary significantly in their susceptibility to erosion, those areas with severe erosion hazards have been delinated. These delinations are based on soil characteristics such as slope, permeability, surface texture and plant cover.

Soils with severe water erosion hazards are the steep to very steep shallow soils including some areas of exposed sandstone and shale. Run-off from these areas is very rapid. Approximately 2 percent of the soils in the district are included in this grouping. Since these areas are used primarily for grazing, intensive management of the grass cover is essential to minimize erosion. Parts of these areas are subject to some natural geologic erosion.

Although not shown on the map, streambank and gully erosion do occur along many of the major drainageways throughout the District.

Because of the variable extremes in rainfall, many of the soils in the District are subject to wind erosion when cultivated unless protected by control measures. The areas delinated as having a severe hazard from wind erosion are the sandier soils. Approximately 20 per cent of the soils are included in this grouping. When these areas are cultivated intensive control measures are required to control wind erosion.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SCS-PORTLAND OREG 1974



LOCATION MAP

LEGEND

▨ Severe Wind Erosion Hazard

■ Severe Water Erosion Hazard

SOIL EROSION HAZARD
DANIELS COUNTY, MONTANA

JULY 1974

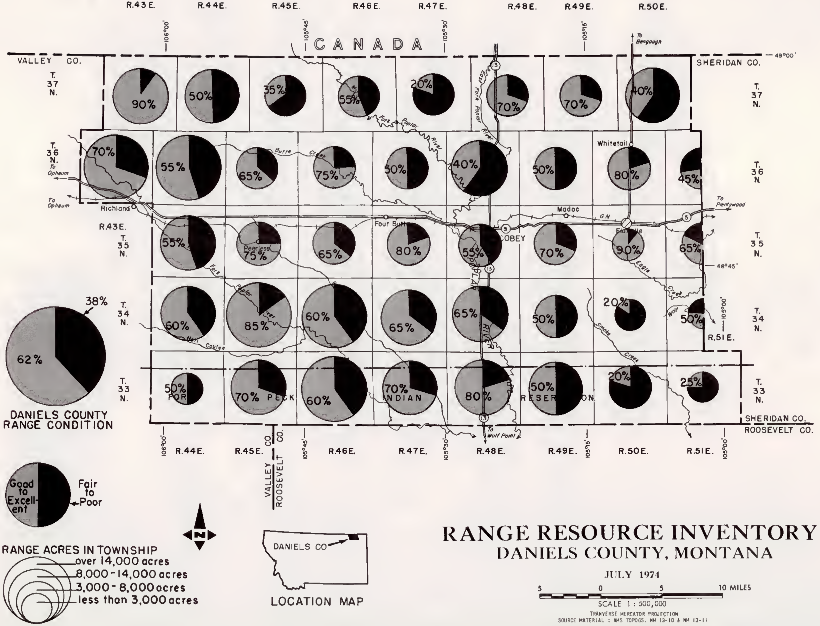
5 0 5 10 MILES

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-5

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND OREG 1974



RANGE RESOURCE INVENTORY
DANIELS COUNTY, MONTANA

JULY 1974

RANGE AND PASTURE

Rangeland is made up of soils on which the plant cover is a combination of native grasses, forbs and shrubs. These lands provide forage for livestock, wildlife habitat, protection of soil from erosion, watersheds, recreation opportunities, natural beauty, and areas for future development. There are approximately 352,896 acres of rangeland in the district accounting for 38% of the district total. All except for 358 acres that are classified as private lands. The 358 acres are under federal control and are located along the international boundary.

Rangelands within the district are grouped into three broad classifications as follows:

A. Soil groups that can produce more herbage than ordinary range uplands because of superior soil moisture availability. Approximately 6% of the rangeland is included in this group.

B. Soil groups with no obvious soil or moisture limiting factors where vegetation can make a normal response to climate. Approximately 71% of the rangeland is included in this group.

C. Soil groups with characteristics or topographic features that limit moisture-holding capacity or affect infiltration rates. Approximately 23% of the rangeland is included in this group.

Range condition is the present composition of vegetation of a range site in relation to the potential plant community for that site. Range condition studies show that approximately 62% of the range in the district is in good to excellent condition and 38% in fair to poor condition. Heavy use over a long period reduces the vigor of the plants and may result in their elimination. Grazing animals are selective and grazing pressure is heaviest on the most palatable plants, which are eventually grazed out if overuse of a range area is prolonged.

Cost return studies show an economic impact of $2.30 per acre if rangeland is improved from fair to good condition. For Daniels County this would have a net economic impact of $312,489.50

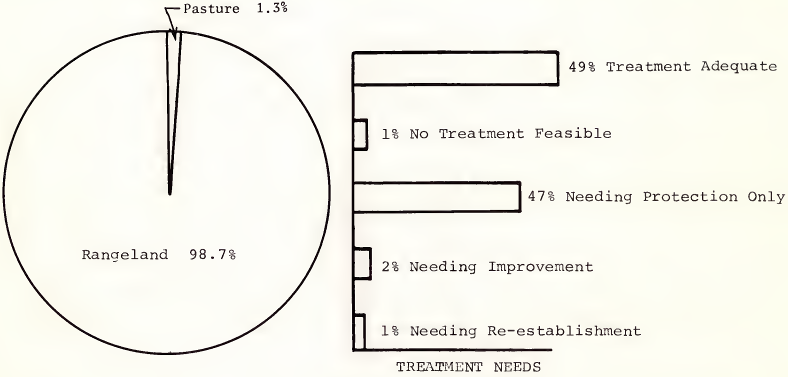
There are approximately 4,550 acres of tame pasture which is used to provide supplemental grazing especially during the early spring months. Tame pastures consist of introduced tame grasses which are best adapted to grazing during certain growing seasons. There is a ratio of 1 acre of tame pasture for each 77.5 acres of rangeland.

The raising of cattle and sheep are the main livestock enterprises. As shown in the following table, livestock numbers have shown a gradual increase since 1966.*

	1974	1972	1970	1968	1966
Cattle & Calves	24,600	21,100	19,000	24,000	21,500
Stock Sheep & Lambs	5,000	6,200	8,000	6,500	6,500
TOTAL	29,600	27,300	27,000	30,500	28,000

* Montana Agricultural Statistics

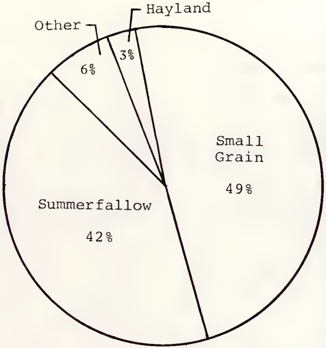
RANGE AND PASTURE CONSERVATION TREATMENT NEEDS

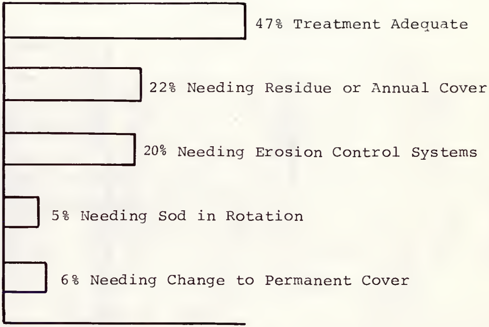


Source: 1973 Conservation Needs Inventory - Daniels County

CROPLAND

554,487 ACRES





TREATMENT NEEDS

Source: 1973 Conservation Needs Inventory - Daniels County

DRY CROPLAND

The major crops grown in the district are wheat, barley, oats, and hay, other crops include small acreages of safflower, flax and rye.

Following is a tabulation of crops by acres for 1973.*

Crop	Acres Harvested
Winter Wheat	1,300
Durum Wheat	4,600
Other Spring Wheat	201,000
Barley	58,200
Oats	6,400
All Hay	23,600

* Montana Agricultural Statistics

There has been a trend in the past five years to devote more acreage to wheat. Wheat acreage decreased by approximately 3% from 1968 to 1973 due primarily to increased acreage of barley, oats, & etc.

The typical dryland cropping system used in the district is alternate small grain-fallow. Occasionally safflower will be substituted for the fallow operations.

A number of producers are using commercial fertilizers. Both nitrogen and phosphate are commonly used in blends of 11-48-0 and 18-46-0 applied at an average rate of 80 pounds per acre.

Dryland crop yields vary considerably from year to year due to variations in rainfall and temperatures. Low rainfall received at the right time and coupled with cool temperatures can produce comparable yields of crops to years having five to six inches more rainfall.

Conversely, years having 12-14 inches of precipitation (a normal year) may produce poor yields if the moisture falls as a series of light showers. Hail storms are common in the district. Nearly every year, crops in some part of the district receive hail damage. The following table shows the variability of crop yield in the district over a period of selected years.*

Growing Season Precip.	10.72	11.95	11.14	9.25	7.94
CROP	1973	1972	1970	1968	1966
Winter Wheat-bu/ac.	19.2	23.5	18.1	17.9	25.0
Spring Wheat-bu/ac.	21.1	25.5	19.4	16.3	27.4
Barley-bu/ac.	29.0	38.5	28.2	22.0	30.0
Oats-bu/ac.	26.3	40.0	31.0	25.0	32.0
All Hay tons/ac.	.84	1.08	.91	.76	.95
Durum	20.0	33.0	21.0	17.7	22.0

*Montana Agricultural Statistics
**1973 Yield data estimated from local sources

RECREATION AND HISTORICAL

At first glance, the area in the district would not seem to provide much in the way of recreation. This is not the case, the land within the district provides excellent bird, waterfowl and big game hunting. Fishing for trout, walleye and northern pike can be found in farm ponds, stocked by the Montana Fish & Game or in the Poplar River. Preditor hunting of coyotes, fox and bobcats can also be enjoyed.

Scobey is the only town in Montana with a curling rink. Curling is a winter sport, popular in the Northern Mid-West, Canada, and other parts of the world.

For those interested in hockey and Canadian football, Regina, Sask.150 miles north of Scobey, offer both.

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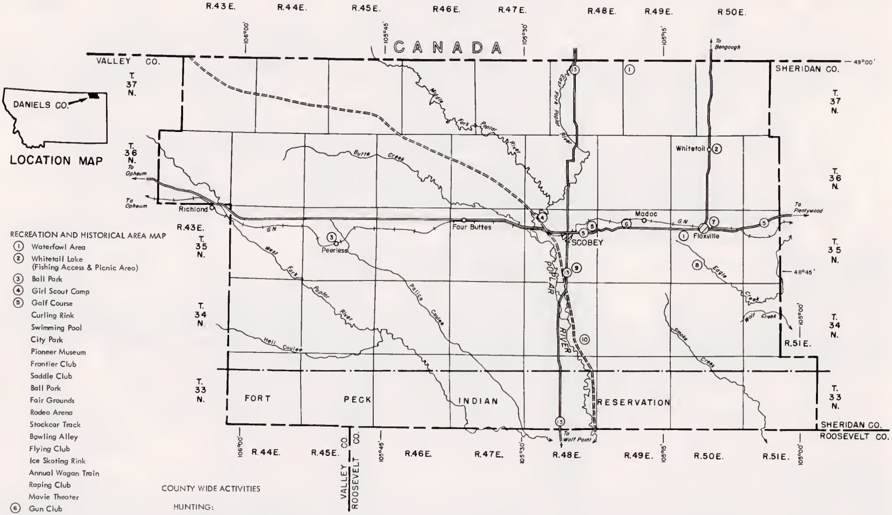
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE



RECREATION AND HISTORICAL AREA MAP

① Waterfowl Area
② Whitetail Lake (Fishing Access & Picnic Area)
③ Ball Park
④ Girl Scout Camp
⑤ Golf Course
Curling Rink
Swimming Pool
City Park
Pioneer Museum
Frontier Club
Saddle Club
Ball Park
Fair Grounds
Rodeo Arena
Stockcar Track
Bowling Alley
Flying Club
Ice Skating Rink
Annual Wagon Train
Roping Club
Movie Theater
⑥ Gun Club
⑦ Go-cart Track
Ball Park
Tennis Court
Horse Race Track
Ice Skating
Rodeo Arena
⑧ Ski Tow
⑨ Picnic Area
⑩ Wood Mountain Trail

COUNTY WIDE ACTIVITIES

HUNTING:

BIG GAME: Whitetail Deer, Mule Deer
GAME BIRDS: Ring-neck Pheasant, Grouse, Hungarian Partridge, Ducks, Geese
VARMIT HUNTING

TRAPPING:

Beaver, Muskrat, Fox, Coyote, Mink

FISHING:

Trout in stock ponds and Walleye and Northern in Poplar River.

SNOWMOBILING

RECREATION AND HISTORIC AREAS
DANIELS COUNTY, MONTANA

JULY 1974

5 0 5 10 MILES
SCALE 1 : 500,000
TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL : AMS TOPOGS. NM 13-10 & NM 13-11

M7-OL-23320-8

FARMS

Types, size and tenure

The number of farms in the district has steadily declined during the past 15 years with the average size of farms increasing proportianately. During 1954-1969 period, the district experienced a 24% decline in farm numbers. Projections indicate a continued gradual decline.

Land values have been increasing steadily. This is beneficial to established farm operators since it increases their net worth giving them greater borrowing power. This is shown by the fact that the average value of land and buildings per farm increased approximately 10 per cent from 1964-1969. The 1969 census shows the average value of land and buildings to be $134,781 per farm. This increased value has made it more difficult for young men to become established in farming. The average age of farm operators in the district is 49.0 years.

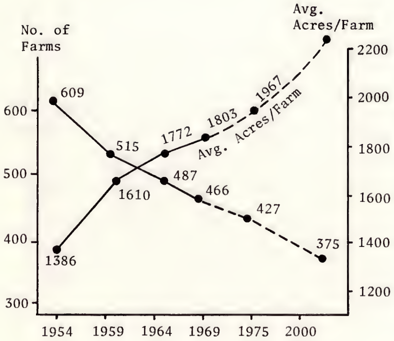
Ownership of farms is as follows:

Full owners	110
Part owners	280
Managers	76

The most common type of farm operation is a combination cash grain and livestock enterprise. Shown below are the number of farms by type of product reported in 1969.

Cattle and calves	207
Hogs	67
Sheep	21
Horses	104
Wheat	430
Barley	282
Oats	197

FARM NUMBERS AND SIZE

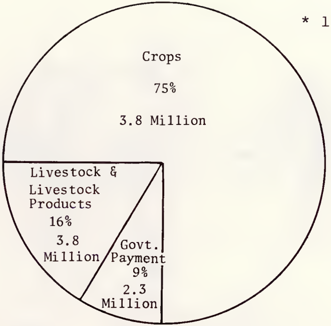


Source: Montana Agricultural Statistics - Projections I.S.U. Agricultural Experiment Station, October 1966

Acres	1964	1969
Less than 50	2	21
50 - 499	75	55
500 - 999	109	82
1000 - 1999	164	160
2000 - Over	137	148

Source: 1969 Agricultural Census

AGRICULTURAL INCOME
1973



* 1973 Montana Agricultural Statistics

FARMS BY ECONOMIC CLASS*

Class	Sales	No. of Farms	% of Farms
I	$40,000 and under	37	8
II	20,000 - 39,999	123	26
III	10,000 - 19,999	140	30
IV	5,000 - 9,999	86	18
V	2,500 - 4,999	49	11
VI	50 - 2,499	6	1
Part - Time		22	5
Part - Retirement		3	1

* Source: 1969 Census of Agriculture

AGRICULTURAL INCOME

Agriculture is the leading industry in the district. Cash farm receipts from the sale of agricultural products rose from 9.85 million dollars in 1968 to 24.3 million dollars in 1973. During this period, livestock and livestock products accounted for approximately 16% of the total cash farm receipts.

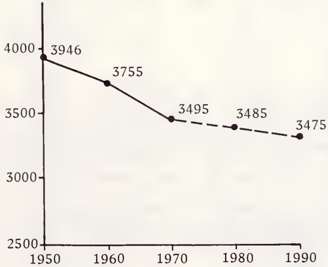
The following table shows the average cash receipts per farm as compared to the average for the state.

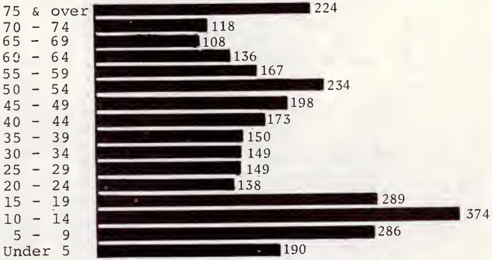
	1968	1970	1972	1973
Cash Receipts/farm (Co. Average)	$20,183	$28,443	$39,434	$51,957
Cash Receipts/farm (State Average)	21,300	26,000	36,400	45,400

In 1973, farms in the district ranked 21st among all Montana counties in average cash receipts per farm.

The distribution of farms by economic class (opposite page) shows the number of farms by sales grouping. It is interesting to note that only 34% of the farms had sales exceeding $20,000 compared to 34% statewide. In addition 25% of the farm operators reported 50 days or more of off-farm work.

POPULATION TRENDS & PROJECTIONS*




POPULATION BY AGE DISTRIBUTION - 1970*

* Montana Data Book-Dept. of Planning & Economic Development Comprehensive Area-wide Sewer & Water Plan - 1970 (Daniels, Sheridan and Roosevelt Counties)

* U.S. Department of Commerce
Bureau of Census

POPULATION

Daniels County like most eastern Montana counties has been faced with a declining population. During the period from 1950 to 1970, population declined from 3946 to 3083. This is a decline of 22% compared to an 18% decline for other eastern Montana counties which lost population during this period.

Population projections continue to show a gradual decline until 1990.

The town of Scobey increased from 41% of the county population in 1950 to 48% in 1970.

	1950	1960	1970
Scobey	1628	1726	1486
Flaxville	N/A	262	185
Rural	2318	1767	1412
COUNTY TOTAL	3946	3755	3083

Daniels County is classed as a rural county. The town of Scobey with a population of 1486 is the major trade center in the district.

As shown by the age distribution chart, the heaviest migration occurs in the age groups after high school to the mid-30's. This is the result of high school graduates moving from rural areas seeking employment, going to college or entering military service. As shown in the distribution graph, Daniels County is experiencing a net loss of about half of its young people between the ages of 18-25.

INCOME

Based on the poverty definition as used in the 1970 census report, 53 or 6.6% of all families had incomes less than the poverty level. This is slightly less than the surrounding counties of Sheridan and Roosevelt. One hundred and one families or 12.5% had incomes less than 125% of poverty level. Most families in this category spend virtually all of their income on the necessities of food, clothing, shelter, transportation and medical care.

Family Income - 1969*

	Non-Farm Families		Rural Farm Families	
	No.	%	No.	%
Under $3,000	27	5	24	9
3,000 - 5,999	119	22	82	30
6,000 - 8,999	199	37	51	19
9,000 - 11,999	55	10	49	18
12,000 - 14,999	81	16	15	6
15,000 - 24,999	42	8	49	18
Over 25,000	12	2	--	--
	535	100%	270	100%

Twenty-seven percent of all families in the district are rural farm families. Although the median income for rural families is lower than for non-farm families, the number with income below the poverty level in this group is lower with 5.9%.

EMPLOYMENT

Nearly one-half of the labor force is directly employed in agriculture and a large portion is engaged in service to agriculture. The distribution of employment is shown in the following table.

Employment by Industry Groups*

Agriculture	414
Mining & Construction	42
Public Administration	64
Manufacturing	6
Transportation & Utilities	33
Trade Service & Finance	354
Professional, Educational And Religious	177
TOTAL	1090

*Source-U.S. Bureau of Census - 1970

CONSERVATION PLANS

Approximately 204 operators have signed cooperative agreements with the District and 181 have completed conservation plans for the development and management of the Natural Resources. This totals approximately 389,843 acres or 43% of the land area in the district. Because of the changes in land use and land ownership and consolidation of operating units, there is continuing need for revisions of these plans as well as the need to expand planned conservation to each acre in the District. The following table shows district conservation plans by age distribution.

	No.	Percent of Total
Plans less than 5 years of age	48	26
Plans 5 to 10 years of age	36	20
Plans over 10 years of age	97	54

Of the 181 conservation plans, 61 were developed under the Great Plains Conservation Program started in 1958.

TRANSPORTATION AND MARKETING

Transportation and marketing are an integral part of the modern production system. Efficient and rapid movement of people, raw materials and finished goods to and from an area is essential to community development.

Transportation

Daniels County is served by several state and county highways. State highway 13 travels from the Canadian border directly south through Scobey and on down into Roosevelt County and meets Highway 2 East of Wolf Point and continous through McCone County where it joins State Highway 200. State Highway 5 going directly West from Plentywood in Sheridan County and terminates in Scobey. All other roadways in the County are not considered principal highways and serve the smaller outlying towns and rural areas.

Rail service in the District is provided by Burlington Northern Railroad which provides freight service on Monday, Tuesday, Thursday and Friday. The nearest rail passenger is an Amtrak stop at Wolf Point daily.

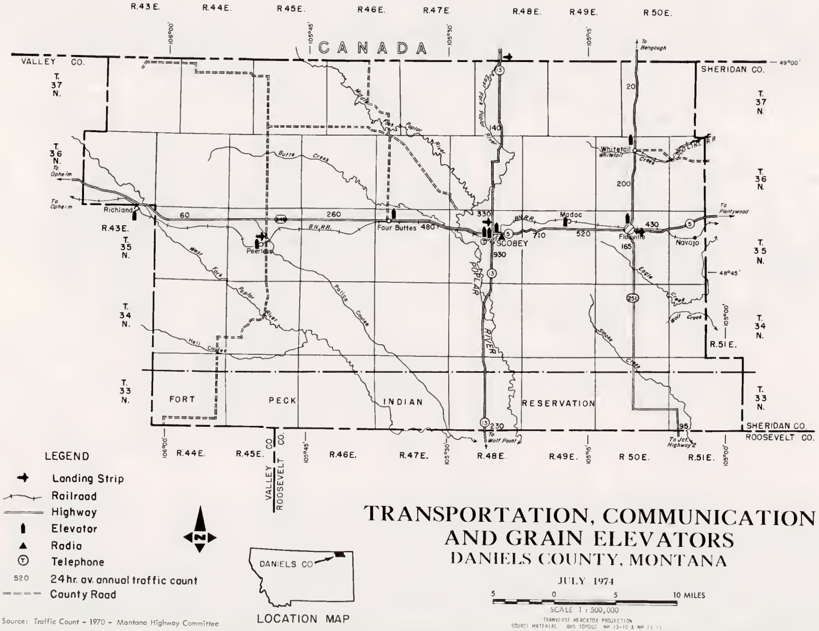
There are no commericial airports in the District, however, daily air service and connections to nation wide airlines are available at Wolf Point. There is a City-County airport in the District for small privately owned aircraft. The landing strip is an all season landing strip.

Marketing

Nearly all of the small grains produced in the District are marketed through local elevators and then shipped by rail or truck to terminal markets, both east and west. The total commercial storage available in the District is 1,325,000 bushels.

Livestock are generally marketed through auction yards located outside the County or sold directly off the ranch to feeder buyers.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA-SCS-PORTLAND OREG 1974



Source: Traffic Count - 1970 - Montana Highway Committee

TRANSPORTATION, COMMUNICATION AND GRAIN ELEVATORS
DANIELS COUNTY, MONTANA

JULY 1974

SCALE 1 : 500,000

TRANVERSE MERCATOR PROJECTION
SOURCE MATERIAL AMS TOPOGS NM 13-10 & NM 13-11

M7-OL-23320-3

PUBLIC FACILITIES

There is two local governmental units within the boundaries of the District. A board of County Commissioners governs the functions of the County. The towns of Scobey and Flaxville are the only incorporated towns in the district and are governed by a mayor council form of government.

The District is served by three high schools and three elementary schools. The 1975-1976 school enrollment is 334 high school students and 255 elementary students.

There is one hospital and annex in the district, two medical doctors, a dental clinic and an optometrist serve the district. All are located in Scobey, the county seat.

Electricity is provided to Scobey, Flaxville and Peerless by Montana-Dakota Utilities. Sheridan Electric Co-op, Inc. and Northern Electric Co-op, Inc. provides electricity to rural areas. All residents throughout the county are provided with telephone service, by Nemont Telephone Cooperative, Inc. or Mountain Bell Telephone Company.

There is one FM radio station located at Scobey. There are no television stations located in the district.

TAXATION

The 1973 taxable valuation of Daniels County was $5,920,704. This is a 9.8% increase over the 1969 taxable valuation. A similar comparison for the state shows an 15.7% increase in taxable valuation during this same period. The following table gives a break down of taxable valuations for 1973 as follows:

	Taxable Valuation	% of Total
Property other than Public Utilities	$5,390,473	91.0%
Local Property of Public Utilities	30,480	.5%
Public Utilities Alloc. by State	498,831	8.4%
Assessment of net proceeds	920	.1%
	$5,920,704	100.0%

The total average mill levy for state, county and schools shows a decrease during the past five years as shown in the following table.

Year	Average mill levy for state, county & schools
1970	146.56
1971	155.44
1972	149.51
1973	148.81
1974	141.48

The average taxable value per acre in Daniels county in 1973 was $2.43. In Valley, Sheridan and Roosevelt counties respectively, it was $2.39, $2.56 and $2.65.

SECTION IV

OBJECTIVES, GOALS AND PRIORITIES

OBJECTIVES & GOALS

The District will work toward:

1. Encouraging and assisting local people to formulate a plan for the orderly development of natural resources in the district using basic soils information as a tool in the decision-making process.

   Goal: Carry out a continous education and information program to reflect changing needs.

2. Including as part of the district information program, the total benefits of conservation planning to all landowners.

   Goal: Program to achieve 85% of the land area under conservation plan by 1990.

3. Encourage the treating of the total resource needs of the land instead of individual problems or needs.

   Goal: Program to have 80% of the land area adequately treated by 1990.

4. Improving the range resources as outlined within the objectives, goals and time frame of the Montana Rangeland Resource Program.

   Goal: Refer to goals of Montana Rangeland Program.

5. Developing an information and education program to continually keep farmers informed of means to improve production while protecting the cropland resource.

   Goal: Establish information and education programs each year covering such items as wind and water erosion control practices, uses of alternate crops and cropping systems, proper application of fertilizers, treatment of saline-seep areas, etc.

6. Monitoring water development projects to assure maximum beneficial use of water within each total watershed area.

Goal: Review water development projects annually to assure a proper balance of available water and developments within each drainage basin. Study with agencies the quality content of water.

7. To study the future long range need for irrigation and other water developments, and determine the probable amount of water needed for these projects.

   Goal: To make application under the Montana Water Use Act for reservation of water for future use.

8. Encourage the development of the recreation potentials of the district with priorities placed on meeting the needs of local people.

   Goal: Establish information programs to acquaint local people with the recreation potentials available within the district.

PRIORITIES

The District will concentrate their efforts of getting treatment on the land to conserve water, prevent erosion and prevent or reduce the pollution of water or land. The second major effort of the district will be to assist the local rangeland committee in improving the condition of the resource as outlined in the objectives and goals of the Montana Rangeland Resource Program.

SECTION V

PROBLEMS AND OPPORTUNITIES

PLANNING & DEVELOPMENT

The Conservation District can contribute significantly to the effectiveness of a resource planning program. The data on the natural resources of the District can help in determining the effects of both urban and agricultural uses on these resources. In resource planning and development, the apparent problems often are not the real problems but rather symptoms of several related problems. Each must be identified and dealt with in a manner that will treat the symptom and effect a cure. In this section the problems relate to each major resource, and the opportunities which follow list ways in which the District will attempt to solve these problems.

Problems

1. In the past there has been no current plan to guide development of the natural resources in the district.
2. Approximately 56 percent of the agriculture land area is presently not under a district conservation plan.

Opportunities

1. Work toward getting soil survey report updated to meet present day criteria.
2. Work closely with county planning board to insure coordination of programs and projects.
3. Provide to the planning board inventory data on natural resources for use in making sound planning decisions.
4. Provide one supervisor to serve as member of county planning board as per Montana statutes.
5. Coordinate and make available to planning board information of other agencies.
6. Develop committee structures of associate supervisors, youth boards, governing

bodies, civic groups and other interested persons to forward the efforts of the district in all resource activities.

7. District employees will be used as available to assist in various phases of conservation planning.
8. District supervisors will encourage the development of conservation plans to neighbor farmers and ranchers.
9. Make use of other programs, such as the Great Plains Conservation Program to encourage the development of Conservation Plans.
10. Establish planning priorities to reflect the treatment needs of the land.

CROPLAND RESOURCES

Stronger prices for grain and other agricultural products are expected to encourage producers to intensify production to bring idle land into production, to modify established cropping patterns and possibly to bring some new land into production. Higher prices for agriculture products are a welcome change to the farm economy since according to 1970 census data, 58% of the farm families in the District had family incomes of less than nine thousand dollars. District supervisors urge however that producers consider all available alternatives before making radical changes in their operations.

Problems

1. There are approximately 35,000 acres of Class 6 land presently being cropped. Grain production on these lands is generally not feasible due to low yields and high erosion hazards.
2. Better crop residue management is needed on 120,000 acres.
3. Strip cropping and associated practices are needed on 75,000 acres for wind and water erosion control. Changes in cropping systems to include more second cropping has resulted in a tendency to destroy certain practices such as stripcropping.
4. Saline-seep occurs on an estimated 5,000 acres of cropland. These areas have expanded considerably during recent years due to above average precipitation. Acres severely affected result in a total loss of crop production.
5. Crop yields vary considerably due to variations in precipitation and other climatic factors.
6. Much of the fertilizer application is not based on soil tests. This results in inefficient use. The problem is further compounded by shortages and inadequate commercial and on-farm storage facilities.
7. With approximately 85% of the harvested crop being wheat, there is a need for additional alternate crops to meet the demands of changing cropping systems.
8. Restrictions have been placed on certain chemicals for weed and insect control.

Opportunities

1. Develop an information program to point out the need and benefits of converting Class 6 lands to permanent cover.

2. Recommend that high priorities for cost-share programs be placed on conversion of Class 6 lands to permanent cover.

3. Encourage expansion of livestock enterprises to fully utilize forage production from Class 6 lands.

4. District will review conservation planning requests and establish priorities to reflect the needs of the land.

5. Conservation practices to control erosion will be based on a detailed study of the problem and a thorough analysis of alternative treatments on record in a conservation plan developed by the cooperator.

6. The district will place increased emphasis on using latest research information to reduce the development of saline-seep areas.

7. Studies presently being conducted, indicate that weather modification may influence patterns and amounts of rainfall in the District. The District recommends that research be limited to specific and carefully designed projects to study its effects on production, cropping systems, erosion, runoff and other consequences which may result from weather modifications.

8. Maximize the use of fertilizer by encouraging application rates based on soil tests.

9. Encourage the proper storage and handling of fertilizer materials.

10. Encourage the development of well planned cropping system using recommended varieties and high quality seeds along with cultural management practices to increase production and reduce problems of weed and insect control.

11. Encourage the use of available programs to aid producers in the establishment of conservation practices to protest soil from erosion.

RANGE AND PASTURE RESOURCES

The improvement of our environment and a potential for increased income are available to local ranchers and the general public through better rangeland management. Approximately 20-25% of the agricultural income is derived from the sale of livestock and livestock products. Range improvement will directly reduce soil losses from wind and water erosion on rangeland. Water and air pollution will be minized. Stream flow stabilization and a clean sediment free water supply will result from improved range management.

Problems

1. 51% or 182,876 acres of private and state rangelands are in need of additional treatment.
2. Need to develop a better understanding of the rangeland resource by ranchers and other users.
3. Lack of adequate water supplies to provide necessary water for efficient forage utilization during all seasons.
4. Competitive use of rangeland for livestock production, wildlife, and recreation.
5. Economic loss due to 39% of the rangeland in fair to poor condition.
6. Need for a better understanding of the rangeland resource by consumers.
7. Losses of livestock due to predators and reduced forage production from rodents and insect infestations.
8. Forage production varies considerably due to variations in precipitation and other climatic factors.
9. Loss of forage production due to increase of noxious weeds in some areas.
10. Need for increased management on fragile lands to reduce sediment pollution.

Opportunities

1. In order to attain the district goals in the rangeland program of improving the rangeland resource, there will be established a coordinated effort between the Rangeland Resource Committee and the District to attain the goals established by the committee.
2. Encourage that the development of the rangeland resource be considered in its proper perspective and coordinated with other land use planning decisions in

the District.

3. Broaden the information and educational program to develop a better understanding of the rangeland resource.
4. Serve in the area of predator control, by functioning as a liasion between local ranchers and predator control agencies.
5. Studies presently being conducted indicate that weather modification may influence patterns and amounts of rainfall in the district. The district recommends that research be limited to specific and carefully designed projects to study its effects on forage production, changes in plant communities and animal populations, erosion, run-off and other consequences which may result from weather modification.
6. There is an economic potential for various types of recreational development especially in the areas of fee hunting and vacation farms and ranches.
7. There is a potential for additional livestock feeding which will make more efficient use of local resources and expand the economic base of the community.
8. Encourage the use of well designed grazing systems to bring about improved range condition and greater economic returns.
9. Encourage additional research which contributes to increased forage production and protection of the rangeland resource.
10. Encourage the use of tame grasses to increase forage production and provide protection to native grasses during critical growing periods.
11. Place planning priorities on critical erosive lands to reduce sediment production.
12. Encourage the use of available programs to aid ranchers in conservation practices to protect the rangeland resource.

WATER RESOURCES

Water is rapidly becoming a priceless resource and there are increasing demands to improve its quality. Community growth, agricultural needs, recreational uses and industrial development are dependent on adequate supplies of good quality water.

Problems

1. Excessive runoff from snow melt causes flooding which damages croplands, roads, bridges and dwellings built on flood plains.
2. High sediment loads carried by flood waters causes silting of water storage impoundments and damage to fish habitat.
3. Additional need for more utilizational of water to increase hay production.
4. Variations in seasonal flow on Butte Creek, East Fork, Middle Fork, and West Fork of Poplar River, Poplar River, Smoke Creek and Coal Creek resulting in under utilization of the water resource and loss of an economic opportunity.
5. Undetermined effects of potential strip mining on ground water aquifers.
6. Mixing of ground water aquifers from drilling and development of wells and exploration studies.

Opportunities

1. Encourage land management practices that will reduce runoff and stabilize highly erodable soils.
2. Encourage the development of potential waterspreading projects along the Poplar River and its tributaries.
3. Integrate the resources of the total watershed area in planning water development projects.
4. Encourage inter-agency cooperation in developing community betterment projects.
5. Encourage complete study of ground water resources.

MINERAL RESOURCES

Coal deposits are extensive and presently being considered for development. This development will have a tremendous impact on the economic, social and environmental aspects of the community.

Problems

1. More information is needed on the effects of mineral exploration and development in regard to the quanity and quality of the ground water resources.
2. There is a lack of information pertaining to the development of coal resources.
3. There is a need for a better understanding by ranchers and farmers of leasing practices and arrangements.
4. Strip mining may result in accelerated erosion, sediment damage, water pollution and associated reclamation problems.
5. Many of the mineral rights are not under control of the surface owner.
6. Division of mineral rights from surface rights cause problems and extra costs to the surface owner, for keeping abstracts current.
7. Areas with the best potential coal development occur on the higher value lands.
8. Trepass by exploratory companies is practiced on county right-of-ways where only an easement has been granted.

Opportunities

1. The development of the coal resources will result in new industry and provide more employment for the area.
2. Encourage more reclamation studies aimed toward bringing mined land back into productive cropland status.
3. Investigate the possibility of formation of a Landowners Association.

RECREATION AND HISTORIC AREAS

Appraising the potential for recreation is an essential step in planning to meet the recreational needs of the community. Recreation is the most underdeveloped resource in the district. The development of this resource could provide an increase in the economic base of the community.

Problems

1. There is a need for additional recreational developments to meet the needs of all age groups.
2. There is a need for more water-based recreation facilities.
3. There is a need to educate local people of the economic opportunities through the development of recreation.

Opportunities

1. Establish a better liason between various agencies during the early planning stages of road design in order that more consideration can be given to the development of waterbased recreation facilities.
2. Work with and encourage local people to consider the development of an overall recreation plan for the entire community.
3. Encourage educational programs to inform farmers and ranchers of the opportunities in the areas of recreation development.
4. Support legislation to provide funding for studies of the ground water resources in the area.
5. Encourage the development of by-product resulting from various forms of coal processing.
6. Encourage educational programs to better acquaint landowners with all aspects of mineral leasing practices.

FISH AND WILDLIFE RESOURCES

Fish and wildlife resources are an important resource in the District. With the increased growth of outdoor oriented recreation, this resource will become an even more important consideration in the overall resource development program of the district.

Problems

1. A few careless and irresponsible people have caused poor relations between landowners and sportsmen.
2. There is no local sportsmen group to establish a liason between landowner and sportsman.
3. Public access and developed facilities for existing fish ponds are inadequate.
4. More pressures are being placed on private land each year for hunting.

Opportunities

1. Inform landowners of potential for various types of recreational developments, especially in the areas of fee hunting, guide service and vacation farms and ranches.
2. Encourage where practical, the development of wildlife habitat areas in conservation planning.
3. Consider items beneficial to wildlife development in the design of conservation practices such as fencing of structures, selection of species adapted to providing food and cover for wildlife, etc.
4. Establish a better liason between various agencies during the early planning stages of road design in order that more consideration can be given to the development of water impoundment areas suitable for fisheries.
5. Sponsor programs designed to promote better relationships between sportsmen and landowners.
6. Encourage landowners and county commissioners to provide and regulate access provisions.

OTHER LANDS

Other lands in the district consist primarily of roads, farmsteads, rural schools, churches, cemetaries, etc. These areas if not properly treated can become sources for sediment production or areas for noxious weed infestations. It is estimated that 28% of the other land in the District is in need of additional treatment measures.

Problems

1. These lands without proper conservation measures, can be a major source of sediment pollution to rivers and streams.
2. These lands without proper treatment provide areas for noxious weed infestations.
3. Unstable ox-bows, streambanks and headcuts are depositing large loads of silts into waterways.
4. There is a need for additional farmstead and feedlot windbreaks and a need for renovation of numerous older windbreaks.

Opportunities

1. Shaping of existing and newly construction borrow areas along with stockpiling of topsoil will assist in getting these areas revegetated sooner, thereby reducing erosion and opportunity for noxious weed infestation.
2. Planting of trees along roadsides will result in reduced snow removal costs, add to the beauty of the countryside, and provide additional areas for wildlife habitat.
3. Consideration will be given to the protection of streambanks when projects are developed which may adversly affect the bank channel or course of the stream.
4. The District will encourage proper measures to control existing streambank erosion problem areas.
5. The District will place increased emphasis on establishment of farmstead and feedlot windbreaks to provide increased soil protection, improved wildlife habitat and asthetic values.

HUMAN & ECONOMIC RESOURCES

A number of social and economic problems relate to the population of the area. Many are deep seated and historical. Others are extensions of social changes affecting the state and nation. Development and improvement of public and community facilities will enhance the general economic and social climate of the entire district.

Problems

1. Out-migration of young people and lack of year around employment opportunities has caused a decline of population.
2. Farm numbers have been continually declining.
3. Lack of experienced farm labor because of its seasonal nature.
4. Lack of facilities and services to satisfy the needs of the agriculture community.
5. Rapidly rising costs of goods and services along with land values are making it increasingly difficult for existing operators to expand their enterprises.

Opportunities

1. Encourage an on-going program to provide facilities and education for training a labor force to meet the needs of agriculture.
2. Encourage local leadership to recognize the potential for economic and social development of the community.
3. Promote the construction of private and community solid waste disposal sites through local, state and federal financing.
4. Continue to encourage information and training programs that will help keep farmers and ranchers informed of new technology, management skills, market facilities and new or improved plant species.

SECTION VI AND SECTION VII

IMPLEMENTATION AND ADOPTION

IMPLEMENTATION

There are numerous techniques for implementing different elements of the districts program. However, the use of each technique will be specifically fitted to the policies, goals and objectives of the district.

A. General Implementation Tools

1. Conservation District Organization, Plan of Work and Projects.

The Conservation District law provides broad authorities for implementing a Conservation District program. The District will provide leadership and utilize all possible assistance in carrying out their program. Standing committees and special committees, such as the Range Resource Committee, will be used as needed to further the objectives of the program.

Regular monthly meeting will be used to review progress and stimulate activities toward implementation of the District program.

2. Conservation District Cooperator Agreements

Voluntary agreements are negotiated between the Conservation District and the individual land occupier or group, association, or entity of government to supply certain services according to a plan such as a Farm or Ranch Conservation Plan, a Range Management plan, or engineering plans for a specific conservation practice.

3. Annual Plan of Work

Based on program goals and objectives, the supervisors will request assistance from local, state and federal agencies as needed to develop an annual plan of work.

4. Tax Policies

Possibly the most important but least understood plan implementation device is state and local taxation.

The tax values placed on land are often conservative, resulting in a direct subsidy to the land speculator. The low cost of holding land vacant is normally more than offset by increasing Market values. This situation is a direct cause of urban and rural sprawl.

In other cases open land is over assessed according to speculative value because of surrounding development. This situation may be partly remedied by the "Greenbelt" law which now provides that qualifying agricultural land is to be taxed according to current rather than potential use.

5. Zoning

Zoning is an exercise of the police power, i.e., the power of the state to regulate in the interests of the health, safety and general welfare of the public. Some of the purposes of zoning include environmental preservation, limitation of congestion, protection of property values and adequate provision of community services. The county commissioners may establish zones or districts for different uses of land and may regulate developmental patterns, building use and the area around the buildings.

Section 16-4704, R.C.M. 1947, provides that zoning regulations shall be in accordance with the comprehensive plan. Comprehensive ordinances apply to an entire planning area and in the absence of such a plan may place the zoning ordinance in questionable legal status.

If a jurisdiction is experiencing emergency land use problems, a temporary interim zoning regulation may be enacted pending the completion of a comprehensive plan within a reasonable time. Such authority is provided to the county commission in Section 16-4711, R.C.M. 1947.

6. Land Use Regulations

Section 76-109, R.C.M. 1947, provides conservation district supervisors with the authority to formulate land use regulations within the District in the interests of conserving soil and water resources and preventing and controlling erosion. A referendum is then submitted to qualified electors for their approval or disapproval of the regulation.

7. Floodway Management

Conservation Districts can contribute data to and become involved in floodway management. Pursuant to the Montana Floodway Management and Regulation act of 1971, a floodway management program may be carried out as follows:

a. A request for flood delineation studies is made by the local subdivision of government to the Montana Department of Natural Resources and Conservation.

b. Completed studies are used if available, and federal agencies (U.S. Geological Survey, SCS, Corps of Engineers, etc.) are contacted by the Department for technical assistance.

c. After delineation, the Department conducts a public hearing on the establishment of the designed floodway. As a result, floodway lines will be recorded and data furnished to local officials.

d. The local governing body then has a maximum of one year to establish and enforce floodway land use regulations at least as stringent as those established by the Department.

e. After local regulation are in effect, or one year after transmission of the floodway data, permits must be obtained before establishing or altering any artificial obstruction within the designed floodway.

8. Subdivision Regulations

The Montana Subdivision and Platting Act of 1973 requires each local governing body to adopt and enforce subdivision regulations by July 1, 1974. These regulations must meet or exceed state minimum requirements and must contain provisions for an environmental assessment to be submitted by the subdivider. Local review procedures as well as district representation on county planning boards will ensure that the

Conservation District is afforded an opportunity to evaluate each proposed subdivision within the district.

B. Assistance

1. Financial and Technical

Major types of assistance available from federal agencies include the Soil Conservation Service and Agricultural Stabilization and Conservation Service programs. In addition, water and sewer facility grants and loans from the Farmers Home Administration and Department of Housing and Urban Development "701" planning grants are also available.

2. Private Assistance

A source of help often overlooked in planning and implementation of programs is the private sector. Citizen groups, area banks or industries, and chambers of commerce may be crucial to plan implentation and should be involved in planning throughout the process.

Resolution of Adoption:

On April 9, 1976 at Scobey at a regular meeting of the board of supervisors, consisting of Chairman-Boyd Tymofichuk, Vice Chairman-William Cromwell, Jr., Secretary-Wallace Fladager, Treasurer-Orville Odegard and Supervisor-Walter Brandt, did meet and review the prepared Daniels County Conservation District Program, and after such review did mutually agree and resolve that such district program be adopted.

Signed this 9th day of April, 1976.

Supervisors:

Boyd Tymofichuk
Chairman

William L Cromwell
Vice Chairman

Wallace Fladager
Secretary

Orville I. Odegard
Treasurer

Walter Brandt
Supervisor